

## CLAIMS

1. A microprocessor with temperature control, comprising:  
  
a microprocessor die with an external interface for externally providing a fan control signal; and  
  
fan control logic, provided on said microprocessor die, that provides said fan control signal based on temperature information associated with the microprocessor.
2. The microprocessor of claim 1, wherein said fan control signal is operative to turn an external fan on and off.
3. The microprocessor of claim 1, wherein said fan control signal is operative to control rotational speed of an external fan.
4. The microprocessor of claim 1, further comprising temperature sense logic, provided on said microprocessor die and coupled to said fan control logic, that provides said temperature information.
5. The microprocessor of claim 4, wherein said temperature sense logic comprises at least one temperature sensor placed on said microprocessor die.
6. The microprocessor of claim 1, wherein said external interface receives said temperature information from an external source.

7. A microprocessor temperature control system,  
comprising:
  - a microprocessor including on-chip fan control logic  
that receives temperature information and that  
provides a fan control signal to cool said  
microprocessor;
  - a fan, externally mounted to said microprocessor,  
having a control input receiving said fan control  
signal; and
  - temperature sense logic that provides said temperature  
information associated with said microprocessor.
8. The microprocessor temperature control system of claim  
7, wherein said fan control logic turns said fan on  
and off.
9. The microprocessor temperature control system of claim  
7, wherein said fan control logic controls rotational  
speed of said fan.
10. The microprocessor temperature control system of claim  
7, wherein said temperature sense logic comprises at  
least one temperature sensitive device placed on the  
die of said microprocessor.
11. The microprocessor temperature control system of claim  
10, wherein said at least one temperature sensitive  
device comprises a thermocouple.

12. The microprocessor temperature control system of claim 10, wherein said at least one temperature sensitive device comprises a thermal diode.
13. The microprocessor temperature control system of claim 7, wherein said temperature sense logic is provided on-chip of said microprocessor.
14. The microprocessor temperature control system of claim 7, wherein said temperature sense logic is external to said microprocessor and provides said temperature information via an external interface.
15. A method of controlling temperature of a microprocessor, comprising:
  - sensing temperature associated with the microprocessor;
  - determining, by the microprocessor, a fan control parameter for controlling an externally mounted fan for cooling the microprocessor; and
  - providing, by the microprocessor, an external fan control signal indicative of the fan control parameter for controlling the fan.
16. The method of claim 15, further comprising turning the fan on and off using the fan control signal.
17. The method of claim 15, further comprising controlling rotational speed of the fan using the fan control signal.

18. The method of claim 15, wherein said sensing temperature comprises measuring temperature using a temperature sensor mounted to the die of the microprocessor.
19. The method of claim 15, wherein said sensing temperature comprises measuring temperature externally to the microprocessor.
20. The method of claim 19, further comprising providing externally measured temperature information to the microprocessor via an external interface.